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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/446,326	12/20/1999	Reiner Delp	MERCK 2038	2158
7590 04/21/2004 Millen White Zelano & Branigan Arlington Courthouse Plaza I Suite 1400 2200 Clarendon Boulevard Arlington, VA 22201			EXAMINER DICUS, TAMRA	
			ART UNIT	PAPER NUMBER
			1774	
DATE MAILED: 04/21/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

**Office Action Summary****Application No.**

09/446,326

**Applicant(s)**

DELP ET AL.

**Examiner**

Tamra L. Dicus

**Art Unit**

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 and 22-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 22-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

The Examiner acknowledges cancellation of claim 21. The 112, 103, and double patenting rejections are withdrawn.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A “light-sensitive” pigment is not claimed in instant claim 1, from which claim 8 depends. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Objections***

2. Claim 11 is objected to because of the following informalities: The phrase “with the aid of a laser a laser-markable” appears to be grammatically incorrect. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 (amended) - 4, 6-10, 12-19, 20, 22-26, and 27-30 (new) are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,422,383 to Takahashi et al.

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5. Takahashi teaches a laser beam absorbing resin composition comprising a resin (plastic), inorganic colorant like metal oxide, titania at col. 3, lines 18-25, **and** a laser beam absorbing substance (col. 2, lines 23-25) where the laser beam is irradiated on the surface of a shaped body to form a discriminative pattern on the surface of the shaped body manufactured in a mill at col. 1, lines 14-19 and Example 3, having a particle size between 0.1 and 50 microns at col. 1, lines 50-60 (equivalent to irregular-shaped micromilled particles). See also col. 2, lines 25-42 where Takahashi explains a laser beam absorbing, thermosetting resin composition contains a resin, and composite particles having an average particle diameter of 0.1-50 micrometers, dispersed in the resin. Each of the composite particles includes a particulate, laser beam absorbing inorganic substance (herein after referred to as LB absorber), and a colorant physically bonded substantially directly to the LB absorber and capable of discoloring upon being heated at a temperature of 250 degrees C or more. The shape of the composite particles is not specifically limited and may be spherical or any other forms. The laser beam absorbing resin composition is applied to any plastic material at col. 4, line 41. The composition of amended instant claim 1 is met.

6. The thermoplastic resins (organic polymer) used are polyethylene, polystyrene, acrylic, polyimide, and polyamide resins (instant claim 3) in Example 2 and col. 4, lines 10-20. The absorber resists high temperature (above 250 degrees C or more) at col. 2, lines 1-5 (claim 2). Colorants may also include copper oxalate, titanium yellow at col. 3, lines 10-25. A method of producing molding comprising marking with laser composition and moulding any shaped product is described in examples of Takahashi.

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7. To instant claims 4, 13, and 14 where a proportion of the absorber material based on a plastics system is between 0.1 - 10% by weight, Takahashi explains at col. 4, lines 23-26, the composite particles mixed with the absorber and thermosetting resins of polystyrene, polyamide, polysulfone resins (same as applicant claims per instant claims 15, 27-30) are contained in 2-50 parts by weight per 100 parts of the resin, meeting applicant's range between 0.1-10%. See col. 2, lines 28-30.
8. To claim 8, Takahashi includes silica, light sensitive material, is added in an amount of 1-500 parts by weight per 100 parts of the resin at col. 4, lines 60-65, meeting applicant's range.
9. Regarding the melting point greater than 300 degrees C (instant claims 18), this is also an inherent property as the same exact polymers are used.
10. Regarding claim 11, Takahashi teaches a method of marking laser-markable plastics with laser beams such as infrared or YAG laser beams at col. 5, lines 47-55 and various methods of forming molding from the laser beam compositions are provided at col. 4, lines 29-40 which include injection molding. See also Examples 2-8.

### ***Response to Arguments***

11. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. The 112 1<sup>st</sup> paragraph is withdrawn due to Applicant's arguments. Applicant argues Takahashi does not teach a laser-markable polymer or an absorber comprising polystyrene or polysulfone type resins. The Applicant has not persuasively argued because Takahashi teaches laser markable polymers at col. 5, line 47 where it states desired marks or patterns such as bar codes or letters having a color clearly discriminative from the background can be marked on the surface of the shaped body formed from the laser beam absorbing resin with a laser beam. This

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is clearly a teaching of a laser markable plastic. The absorbing resin (plastic) can be polysulfone and polyimide (col. 3). This is mixed with particles. The rejection is maintained. The polymers are indeed taught to be laser-markable.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 5,840,791 teaches laser-markable polymer molding compositions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamra L. Dicus  
Examiner  
Art Unit 1774

April 15, 2004

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER

